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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/489,846	01/24/2000	Hideya Takeo	Q56532	6337

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EXAMINER

EDWARDS, PATRICK L

ART UNIT	PAPER NUMBER
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2621

DATE MAILED: 12/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/489,846

Applicant(s)

TAKEO, HIDEYA

Examiner

Patrick L. Edwards

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 06 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7 and 9-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1, 2 and 9-14 is/are allowed.
- 6) ☒ Claim(s) 3-5, 15-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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### DETAILED ACTION

1. The response received on 06 October 2005 has been placed in the file and was considered by the examiner. An action on the merits follows.

#### *Allowable Subject Matter*

2. Claims 1, 2, 9-14 are allowed.
3. The following is an examiner's statement of reasons for allowance:

The closest cited prior art (Rogers et al. US 2002/0081006) fails to teach all of the limitations of the newly amended independent claim 1. Specifically, the newly-added limitation of amended independent claim 1—when taken in conjunction with the other claim limitations—is not taught by Rogers.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

#### *Claim Rejections - 35 USC § 102*

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 3-5 and 15-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Rodgers et al. (U.S. Patent Application Publication No. US 2002/0081006 A1).

With respect to claim 3, Rodgers et al. discloses an abnormal pattern detection processing method comprising: detecting an abnormal pattern in an image, based on inputted image information (As described in the rejection of claim 1.); processing the detected abnormal pattern (As described in the rejection of claim 1.); performing a pattern reading assessment using the image information (see paragraph [0014]: The reference describes that a radiologist examines the suspicious detections of the CAD system and either rejects or accepts them, thus forming a third set of suspicious detections S3.); performing a pathologic assessment of the abnormal pattern (see paragraph [0014]: The reference describes that a radiologist reviews the image and reports a set of suspicious regions, S1 (i.e. a pathologic assessment of the abnormal pattern).); relating a result of the detected abnormal pattern

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processing and a result of the pattern reading assessment to a result of the pathologic assessment, for each of a plurality of items of the inputted image information (see paragraph [0014]: The reference describes that a set S4 is determined which is the union of S1+S3. Therefore, since S3 is formed on the basis of S1 and S2, and S4 is determined by relating S1 and S3, S4 is a relationship between a result of the detected abnormal pattern processing and a result of the pattern reading assessment to a result of the pathologic assessment.); and storing the plurality of processed detected abnormal pattern results, the plurality of pattern reading assessment results and the plurality of pathologic assessment results (As described in the rejection of claim 1.).

With respect to claim 4, Rogers et al. discloses that a quantitative evaluation of the pattern reading assessment is performed, on the basis of the stored plurality of pattern reading assessment results and the stored plurality of pathologic assessment results (As described in the rejection of claim 2).

With respect to claim 5, Rogers et al. discloses an abnormal pattern detection processing system, which detects (see Fig. 1: Block 300 which represents detecting clustered microcalcifications.) and processes an abnormal pattern (see Fig. 1: Block 600 which represents processing the results) in an image represented by image information on the basis of inputted image information, comprising: a means relating a result of the detection processing to a corrected detection processing result, for each of a plurality of items of image information (see Fig. 31: The combination of blocks 50 through 70 depict that the CAD system outputs, S2, are incorporated with the radiologist's analysis to optimize the overall sensitivity of detecting true positives.), and storing the plurality of detection processing results and the plurality of corrected detection processing results (see paragraph [0046]: The reference describes the use of a 2 GB hard drive of a general-purpose computer for storing information); and evaluator means for performing quantitative evaluation of the detection processing on the basis of the plurality of results of detection processing and corrected detection processing results stored in the relating and storing means (This evaluation is the same evaluation as described in the rejection of claim 2. Since the reference describes a computerized system (see paragraph [0046]), then the computers processor acts as the evaluator means.)

With respect to claim 7, Rogers et al. discloses an abnormal pattern detection processing system, which detects and processes an abnormal pattern in an image represented by image information on the basis of inputted image information (As described in the rejection of claim 5 above.), comprising: a means relating a result of the detection processing and a result of a pattern reading assessment using the image information to a result of pathologic assessment concerning the abnormal pattern, for each of a plurality of items of the image information (As described in the rejection of claim 5 above), and storing the plurality of detection processing results, the plurality of pattern reading assessment results and the plurality of pathologic assessment results (As described in the rejection of claim 5 above.); and evaluator means for performing a quantitative evaluation of the pattern reading assessment on the basis of said plurality of pattern reading assessment results and the plurality of pathologic assessment results stored in said relating and storing means (This evaluation is the same evaluation as described in the rejection of claims 2 and 5. Since the reference describes a computerized system (see paragraph [0046]), then the computers processor acts as the evaluator means.).

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With respect to claim 15, Rogers et al. discloses that the processing automatically determines whether the abnormal pattern exists or not based on a result of the detection (see paragraph [0042]: As described in the rejection of claim 1 above, the reference describes filtering the image to reduce noise and then filtering the image using an optimized difference of Gaussians (DoG) filter to enhance the microcalcifications. These first two steps correspond to determining a second set of suspicious detections, S2, described in paragraph [0014]. These processing steps are performed by the CAD system and are performed automatically. The processing steps determine a set of suspicious detections, which corresponds to determining whether the abnormal pattern exists or not.).

With respect to claims 16 and 17, which merely call for a system for performing the method of claims 14 and 15, respectively, Rodgers et al. discloses such a system as can be seen in Fig. 1.

### Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick L Edwards whose telephone number is (571) 272-7390. The examiner can normally be reached on 8:30am - 5:00pm M-F.

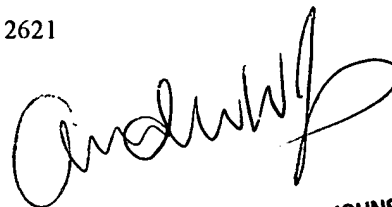
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joe Mancuso can be reached on (571) 272-7695. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patrick L Edwards

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ANDREW W. JOHNS  
PRIMARY EXAMINER